

# Experiences With “Acute” Food Insecurity Among College Students

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This study sought to understand which racial/ethnic student groups experience food insecurity and the extent to which other external insecurities and challenges are predictive of acute food insecurity. Data were derived from the Community College Success Measure (CCSM), an institutional needs assessment tool used by colleges to examine challenges facing underserved students. Findings from this research demonstrated that multiethnic and Black students are most likely to experience food insecurity.

**Keywords:** colleges; race; regression analyses; stress/coping

Across the nation, numerous colleges and universities are expanding student services operations to enhance support for students experiencing food insecurity. Food insecurity occurs when one experiences “limited or uncertain availability of nutritionally adequate foods” (Feeding America, 2014, p. 2). Exposure to food insecurities is associated with unhealthy eating, an increased likelihood of chronic illness, and anxiety and stress (National Research Council, 2006).

Dubrick, Mathews, and Cady (2016) argued that the rising cost of higher education and the growing numbers of students from underserved communities may indicate that food insecurity is becoming more prevalent. This challenge is thought to be heightened at community colleges, where a large percentage of students are low-income and students of color. A recent study by Goldrick-Rab, Richardson, and Hernandez (2017) found that 67.0% of students experience some degree of food insecurity, with former foster youth and students with children among those most likely to experience this challenge. Other research has shown that 12.3% of community college students experience acute levels of food insecurity (Wood, Harris, & Delgado, 2016a). In response, many colleges have started to create food pantries, offer reduced lunch programs, and form partnerships with food banks (Wood et al., 2016b).

These efforts are bolstered by the widely held view that food insecurity inhibits student success (Wood & Harris, 2017). Prior research suggests that students with food insecurity are less likely to be high achieving (Maroto, Snelling, & Linck, 2014). Moreover, in

an analysis of data from 3,647 California community college students, Wood et al. (2016b) found that students with food insecurity were less likely to report a sense of belonging, feel they are welcome to engage with faculty, and access campus services. Moreover, food insecure students reported lower confidence in their academic abilities, perceptions of the usefulness of college, and authentic interest in learning. Bearing this in mind, the study sought to understand which racial/ethnic student groups experience food insecurity and the extent that other external insecurities and challenges are predictive of acute food insecurity.

## Method

Data were derived from the Community College Success Measure (CCSM), an institutional needs assessment tool used by colleges to examine challenges facing underserved students. The CCSM is distributed to randomly selected course sections at participating institutions. This analysis draws from five southern California colleges that participated in the revised, paper-based CCSM that queries students on insecurities. All surveys were collected in class from a census sample of students in the randomly selected sections. Data from 6,103 students were analyzed using descriptive statistics and logistic regression. Separate models were calculated for each racial/ethnic group.

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**Table 1**  
**Descriptive Statistics for Sample**

	White (%)	Asian (%)	Black (%)	Latino (%)	Multiethnic (%)
<b>Age</b>					
18 to 24	67.9	77.7	58.2	79.0	77.8
25 to 31	18.0	12.8	18.0	13.4	14.0
32 or older	13.5	8.8	23.0	7.0	7.9
<b>Dependents</b>					
Have dependents	24.4	25.7	44.7	33.2	25.1
<b>Income</b>					
Low-income (<\$30,000)	64.0	68.9	79.0	73.7	70.0
<b>Enrollment</b>					
Full-time	61.0	68.7	45.3	51.8	57.4
<b>Credits</b>					
None	14.4	18.0	18.8	17.5	16.0
1 to 14 credits	20.1	15.0	21.4	19.0	18.7
15 to 29 credits	18.4	20.1	17.4	22.8	21.2
30 to 44 credits	19.5	18.6	16.4	18.4	18.0
45 or more credits	27.5	28.3	25.9	22.3	26.1
<b>Insecurities/challenges</b>					
Food insecurity	9.2	9.2	16.0	10.4	16.5
Housing insecurity	33.6	32.8	44.0	36.1	36.2
Transportation insecurity	32.2	31.4	44	39.6	42.6
Legal concerns	11.3	11.5	15.7	13.7	13.3
Relationship concerns	38.6	28.4	36.8	33.6	45.6
Employment concerns	29.0	23.6	39.4	31.9	34.2
Health concerns	29.0	25.8	29.9	25.9	31.8
<i>N</i> (% of sample)	1,965 (32.20)	876 (14.40)	718 (11.80)	2,138 (35.0)	406 (6.70)

Food insecurity was a dichotomous measure based on students indicating challenges with “hunger,” an acute form of food insecurity. Students were also queried about other insecurities and challenges, including lack of stable housing, transportation issues, legal concerns, relationship challenges, employment pressures, and health issues (using a 2-year timeframe). Similarly, these items were also dichotomous. Data were analyzed in this exploratory study using SPSS and tested at the .05 level.

## Findings

Table 1 presents the percent breakdown of students experiencing food insecurity and other external challenges by race/ethnicity. Exposure to food insecurity was found to differ significantly across groups ( $\chi^2 = 41.51, p < .001$ , Cramér’s  $V = .08$ ). Multiethnic students had the highest rate of reported insecurity at 16.5%, closely followed by Black students at 16.0%. These percentages fall above those reported in prior research. Asian and White students had the lowest rate at 9.2%, respectively, for both groups, slightly below that of Latino students at 10.4%.

Subsequently, external pressures and several demographic variables, including age, total dependents, income, enrollment status, and credits earned, were examined as predictors of food insecurity. Models were calculated separately based on respondent’s race/ethnicity. Table 2 presents the odds ratios (OR), standard errors, and  $R^2$  information for each model. Based on the Nagelkerke  $R^2$ , models

for Black and White students accounted for the most variance in predicting food insecurity at 36% for both groups.

Being low-income (\$30,000 or lower) was a significant predictor of food insecurity for White and Asian students. The odds of experiencing food insecurity were 82% greater for White students who were low-income and 158% greater for Asian students ( $p < .01$ ). However, income was not a significant predictor for Black, Latino, or multiethnic students. Age was a significant determinant of food insecurity for White students, with those between the ages of 25 to 31 having 238% greater odds of experiencing food insecurity than White peers of other ages ( $p < .01$ ). Having dependents and credits earned was not predictive of food insecurity for any student demographic. However, being enrolled full-time was a predictor of insecurity for Latino students (OR = 1.78,  $p < .001$ ).

Analyses of external insecurities and challenges (e.g., transportation concerns, legal challenges) were significantly predictive of food insecurity. Across all racial/ethnic groups, students experiencing housing insecurity (having an unstable place of living) had significantly greater odds of experiencing food insecurity. For instance, the odds of experiencing food insecurity were 369% greater for White students with housing insecurities and 320% greater for Black students ( $p < .001$ ). Similarly, students with legal concerns had greater odds of experiencing food insecurity. For example, the odds of multiethnic students with legal concerns experiencing food insecurity were 251% greater ( $p = .001$ ), followed by that of Black students at 222% ( $p < .001$ ).

**Table 2**  
**Odds Ratios (OR) and Standard Errors Predicting Food Insecurity**

	White		Asian		Black		Latino		Multiethnic	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Age										
18 to 24	1.70	0.41	2.94	0.80	1.05	0.39	1.01	0.44	0.88	0.83
25 to 31	3.38**	0.41	3.00	0.85	1.25	0.42	1.27	0.46	0.44	0.91
32 or older	1.72	0.50	1.69	1.09	0.59	0.54	0.89	0.60	0.46	1.19
Dependents										
Have dependents	0.99	0.22	1.11	0.30	1.07	0.26	1.19	0.17	1.03	0.36
Income										
Low-income (<\$30,000)	1.82**	0.22	2.58**	0.36	1.97	0.37	1.18	0.120	1.17	0.37
Enrollment										
Full-time	1.20	0.19	0.90	0.29	1.42	0.25	1.78***	0.16	1.44	0.33
Credits										
None	1.23	0.34	1.05	0.46	2.22	0.49	1.47	0.33	1.19	0.57
1 to 14 credits	0.79	0.32	1.00	0.47	2.06	0.47	1.81	0.31	0.97	0.57
15 to 29 credits	0.85	0.32	0.80	0.45	1.16	0.50	1.20	0.32	1.01	0.57
30 to 44 credits	0.55	0.34	0.76	0.45	0.92	0.50	1.03	0.33	0.43	0.59
45 or more credits	0.69	0.34	0.77	0.48	1.90	0.48	1.18	0.34	0.59	0.63
Insecurities/challenges										
Housing	4.69***	0.22	2.92***	0.32	4.20***	0.28	2.81***	0.18	3.35***	0.33
Legal	1.83**	0.22	2.27*	0.32	3.22***	0.29	2.51***	0.18	3.51***	0.38
Health	3.40***	0.19	1.31	0.30	2.82***	0.26	2.31***	0.17	2.47**	0.33
Transportation	2.48***	0.20	1.21	0.30	1.59	0.27	2.44***	0.18	1.69	0.33
Employment	1.26	0.20	2.33**	0.30	1.65	0.26	1.38	0.17	1.81	0.34
Relationships	1.75**	0.19	2.21**	0.29	1.77*	0.26	1.36	0.17	1.14	0.34
Constant	0.003	0.54	0.004	0.98	0.01	0.66	0.01	0.52	0.03	0.93
Cox & Snell $R^2$	0.16		0.13		0.21		0.14		0.18	
Nagelkerke $R^2$	0.36		0.29		0.36		0.28		0.31	

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

For all racial/ethnic groups (other than Asian), health concerns were determinants of food insecurity. As such, White (OR = 3.40), Black (OR = 2.82), Latino (OR = 2.31), and multiethnic (OR = 2.47) students with these concerns had greater odds of experiencing food insecurity ( $p < .001$ ). Beyond housing, legal, and health concerns, greater differences in predictors of food insecurity across groups emerged. For instance, transportation challenges were predictive of food insecurity for White (OR = 2.48) and Latino (OR = 2.44) students ( $p < .001$ ), while employment was predictive for Asian students only (OR = 2.33,  $p < .01$ ). Relationship challenges were predictive for White (OR = 1.75) and Asian students (OR = 2.21,  $p < .001$ ) as well as Black students (OR = 1.77,  $p < .05$ ).

### Discussion and Recommendations

This study demonstrated that multiethnic and Black students are more likely to experience food insecurity. These percentages fall above estimates of self-reported challenges with acute food insecurity from prior research (Wood et al., 2016b). Moreover, this research has shown that housing insecurity and legal concerns, followed by health issues, are the most prevalent predictors of food insecurity across racial/ethnic groups. Transportation

concerns and employment issues were relevant determinants for certain racial/ethnic subgroups as well.

In recognition of the high percentage of students in this sample who experienced food insecurity, it is necessary for campuses to provide opportunities for students to gain access to healthy and sustainable sources of food. Moreover, our analyses revealed the utility of understanding how other external challenges influence food insecurity and the convergence of all insecurities on college students. Given this, it is necessary for campuses to test holistic interventions that engage a multitude of challenges rather than address myopic external barriers (Maroto et al., 2014). Then, campuses can determine what impact, if any, these interventions have on the myriad of insecurities and challenges that students face. Practitioners can use the results from this study to better identify and target students in need of support interventions. For example, colleges with food pantries may also consider having additional services such as bus passes, free health resources, and job boards. Moreover, these pantries can serve as venues for connecting students with services provided by local nonprofits that specialize in legal services and housing.

Future research can expand on this study by constructing models that disaggregate by both race/ethnicity and gender. This may provide additional insight into predictors of food insecurity,

particularly in light of research that found that college men are more likely to experience food insecurities than their female peers (Wood et al., 2016b). Additionally, while this study employed a dichotomous outcome assessing “hunger,” other research could explore varying degrees of exposure to food insecurities as levels in an outcome variable.

## REFERENCES

- Dubick, J., Mathews, B., & Cady, C. (2016). *Hunger on campus: The challenge of food insecurity for college students*. Boston, MA: National Student Campaign Against Hunger and Homelessness.
- Feeding America. (2014). *Hunger in America 2014*. Chicago, IL: Author.
- Goldrick-Rab, S., Richardson, J., & Hernandez, A. (2017). *Hungry and homeless in college: Results from a national study of basic needs insecurity in higher education*. Madison, WI: Wisconsin Hope Lab.
- Maroto, M. E., Snelling, A., & Linck, H. (2014). Food insecurity among community college students: Prevalence and association with grade point average. *Community College Journal of Research and Practice*, 39, 515–526. doi:10.1080/10668926.2013.850758
- National Research Council. (2006). *Food insecurity and hunger in the United States: An assessment of the measure*. Washington, DC: National Academies Press.
- Wood, J. L., & Harris, F., III. (2017). *Five critical facts about men of color and food insecurity in community colleges*. San Diego, CA: Community College Equity Assessment Lab.
- Wood, J. L., Harris, F., III, & Delgado, N. R. (2016a). *Prevalence of insecurities: Percentage of students by race reporting insecurities [Addendum]*

*Struggling to survive—Striving to succeed: Food and housing insecurities in the community college*. San Diego, CA: Community College Equity Assessment Lab.

Wood, J. L., Harris, F., III, & Delgado, N. R. (2016b). *Struggling to survive—Striving to succeed: Food and housing insecurities in the community college*. San Diego, CA: Community College Equity Assessment Lab.

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